



Licensing Issues Session W6

Licensing Implications of Technical Issues

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Topics

- Licensing challenges of technical issues
 - Alternate source term (AST)
 - Quantification of radiological risk for use with Notice of Enforcement Discretion (NOED)
- Impact of the challenges
- NRC position and approach for resolution

Alternative Source Term

- Studies conducted following the accident at Three Mile Island identified conservative assumptions in the traditional accident source term used for plant licensing
- The accident source term was revised in December 1999 through rulemaking to 10 CFR 50.67, “Accident Source Terms”
- Guidance for implementing the revised rule, Regulatory Guide 1.183, was issued in July 2000

Alternate Source Term

- Issues related to implementing AST
 - Eliminating or relaxing requirements for accident dose mitigation equipment
 - Crediting standby liquid control (SLC) system for pH control in BWRs
 - Use of AST in operability determinations for control room in-leakage

Alternate Source Term

- Issue: TS amendments propose to remove LCOs or relax surveillances for previously credited accident dose mitigation equipment
- Impact: Lack of precedent results in increased review times and requests for additional information to address concerns about immediate or future impact on “defense-in-depth”
- Staff Position: 50.36 basis for approval to remove equipment requirements from TS is not necessarily sufficient to relax or eliminate requirements from the licensing basis
- Staff Actions: Develop consistent approach for weighing conservatisms and uncertainties to address defense-in-depth

Alternate Source Term

- Issue: Crediting SLC system for pH control in BWRs
- Impact: Processing of amendments was delayed while staff developed guidance
- Staff Position: Post-LOCA pH control is a new safety function for this existing system
- Staff Actions: Staff review guidance was developed and requests for additional information were issued for amendments already in process

Alternate Source Term

- Issue: Non-AST plants use of AST analytical methods in operability determinations
- Impact: Uncertainty about appropriateness of this use of AST caused some licensees to delay control room in-leakage testing per GL 2003-01

Alternate Source Term

- Staff Position: If control room envelope in-leakage is greater than the amount assumed in the licensing basis radiological consequence analyses, the licensee may use AST analytical methods in performing its operability determination to verify that the control room ventilation system can accomplish its specified safety function
- Staff Actions:
 - Provided comments on the NEI white paper on the use of GL 91-18 process and AST in context of control room habitability
 - Supporting follow-up discussions with stakeholders and evaluating appropriate vehicle for additional communication
 - Awaiting submittal of modified NEI white paper

Notice of Enforcement Discretion

- NOED provides relief when license conditions would require:
 - an unnecessary plant transient, or
 - performance of testing, inspection, or system realignment that is inappropriate for the specific plant conditions, or
 - unnecessary delays in plant startup without a corresponding health and safety benefit, or
 - the potential for an unexpected plant shutdown during severe weather or other natural phenomena
- NOED must result in no net increase in radiological risk (with the exception of severe weather NOED)
- NOED policy has not changed

Notice of Enforcement Discretion

- Issue:
 - Determination of “no net increase” has not been well understood
 - Availability of tools to assess the radiological risk for shutdown and transient conditions is limited
- Impact: Without technically defensible assessment of risk, a NOED cannot be approved
- Staff Position:
 - Risk determination compares the risk of operating with the degraded condition and compensatory measures to the alternative risk of the transition periods of shutdown/startup and performance of activity in another MODE. The assessment of risk should be technically defensible.
 - Emergency or exigent amendments should be used when time permits (typically ~72 hours)
- Staff Actions:
 - Attempting identification of qualitative “rule of thumb”
 - Evaluating work done by one utility (SONGS) in modeling transition risk
 - Will review EPRI paper on transition risk expected in March 2004

Conclusions

- NRC is committed to continuous improvement to enhance clarity of policies and guidance
- Delays result from the lack of a shared understanding of guidance for new or changing situations
- The sooner an implementation issue is identified, the sooner a dialog can begin, and the better the prospects for timely resolution
- We are looking forward to industry and individual licensee input on the details of AST and NOED implementation